

1608/1434.

Home

THE
EFFICACY AND INNOCENCY
OF
S O L V E N T S,
CANDIDLY EXAMINED.

(PRICE ONE SHILLING AND SIX-PENCE.)

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1608/1434



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EFFICACY AND INNOCENCY

Medica OF *Edinburgh*

S O L V E N T S

~~OF THE~~

CANDIDLY EXAMINED;

WITH

EXPERIMENTS AND CASES.

By ROBERT HOME, SURGEON to the SAVOY.

where the Savoy

L O N D O N :

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M,DCC,LXXXIII.

THE
OF
ETHICS AND INNOVATION

S O R V E N T S

ACQUISITION

Errata

Page 53 L 5 for "fat" read "corpulent"
52 L 7 for "bladder" read "uterus"

EXPERIMENTS AND CASES

ROBERT HORN, ESQ. OF THE BARR

LONDON
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THE
EFFICACY AND INNOCENCY

OF

SOLVENTS,

CANDIDLY EXAMINED.

CHAPTER I.

THE AUTHOR'S CASE OF THE STONE
AND GRAVEL, INTERSPERSED WITH
SOME EXPERIMENTS INTENDED TO
ASCERTAIN THE SOLVENT POWER
OF SOAP-LYE AND QUICK LIME.

I INHERITED the gravel and stone
from my father, who was afflicted
with nephritick complaints in the latter
part of his life, and found considerable
B benefit

benefit from the use of honey. He died of another disorder in his sixty-first year.

My first attack was in 1768, when recollecting the relief my father received from honey, I immediately had recourse to it.

I USED also soap, and lime water, (which were then in vogue) by the advice of a physician, a friend of mine.

It was the late Sir John Pringle who finally determined me to persevere in a course of honey, and not to take less, in one shape or another, than a pound per week.

It certainly was of considerable service to me;—for many years my fits were mode-



moderate, and not frequent; sometimes not above one of any consequence in a year, after which I generally passed a red stone about the size of a small pea, and sometimes a few others much smaller.

In the summer of 1780, I had a nephritick fit, which was not more violent than usual; but what gave me uneasiness was, that after the stone had descended into the bladder, I never observed that I passed it; though it was of much consequence to watch its issue.

In a few months after, my irritations to urine became more frequent, and by degrees more painful, especially on exercise; and bloody urine frequently attended them. They became at last so very insupportable, as to convince

me I had a stone in my bladder; and brought me to a determination (which I had been long averse from, on account of the strict regimen enjoined) to begin a course of lixivium.

MAY 13th, 1781, I began the use of lixivium, making choice of that invented and recommended by Dr. Jurin*; of which I took two tea spoonfuls twice a day, in half a pint of veal broth, at ten at night and seven in the morning. My irritations were much increased a few days after I began it, upon taking some walking exercise; but they soon went off, and in a fortnight became very supportable.

* SOLD by Mr. Langley, Apothecary in Old Broad Street.

I CONTINUED the use of Jurin's lixivium till the middle of July, when I changed it for Blackrie's*†; in this I persevered 'till September 18th, excepting twice that I intermitted it for a few days, upon slight feverish complaints. One tea spoonful of this last lixivium twice a day was what was directed to be taken, and I found it full as pungent as two of the former. I now thought it proper to take a short respite.

AFTER taking the lixivium about nine weeks, it occurred to me, that if my urine, saturated by the lixivium, had a considerable effect in dissolving a

* My reason for this will be given in the experiments on the comparative strength of some of the lixivia now in common use.

† SOLD at Slater and Co's. Chymists in the Poultry.

stone formed in the urinary passages, when out of the bladder, it would be an undeniable proof, that it must have the same effect in the kidneys and bladder.

EXPERIMENT I.

I PUT a red stone which I had formerly passed, (weighing exactly two grains) July 1st, into a gallipot which held thirteen ounces; this I filled with my urine warm from the bladder betwixt the hours of eight and nine in the morning, when I had taken nothing from tea time the evening before, excepting my broth, saturated with the lixivium as before mentioned.

THE gallipot was set in a closet with a west aspect, and the urine changed every morning.

SEPTEMBER 18th, when I left off taking the lixivium, I weighed the stone, and found it reduced to barely a quarter of a grain.

EXPERIMENT II

AUGUST 4th, I put into the gallipot two other stones I had passed. One of a longish shape, weighing two grains and a quarter, the other round, weighing one grain and three quarters.

SEPTEMBER 18th, the long one weighed exactly one grain ; and the round one three quarters of a grain.

ABOUT the middle of October, my irritations returned, and gradually increased ; which made me again have recourse to the lixivium on the 1st of November,

I TOOK Blackrie's, and was soon relieved. It was continued until Christmas-day, when I again intermitted the use of it, 'till January 15th, 1782, when my irritations returned.

THE late Sir John Pringle having a partiality for that lixivium made and sold by Mr. Lane*, I procured a half

* APOTHECARY in Aldersgate Street.

pint bottle of it, and took two tea spoonfuls thereof at the usual hours, twice a day, which had the same effect as the others.

THOUGH my experiments last summer, evidently proved the urine saturated by the lixivium to have a solvent power; yet as the small stones I myself had passed, were probably much softer than those grown so large in the bladder, as to bear being extracted by the operation of lithotomy*; to pursue my experiments on harder stones, I therefore procured some of that character from Mr. Hunter.

* THE first hint of this was given me by Dr. Donald Monro.

EXPERI-

EXPERIMENT III.

MARCH 2d, I put into the same gallipot formerly used, a fragment of calculus, of a pear-like shape, and which seemed to have been a nucleus, weighing fifteen grains and three quarters. Another of a brown colour, seemingly hard, and to have been a lamina separated; weighing seven grains and three quarters. And an irregular shaped one weighing five grains and three quarters. The lixivium I took was Blackrie's. As the weather was very cold for the season, I set the gallipot by the kitchen fire, but at a foot and a half distant from it.

MARCH 22d, on being weighed, each of them had lost three quarters of a grain.

HITHERTO

HITHERTO I had been very careful to comply with Dr. Chittick's regimen as published by Blackrie, though extremely disagreeable ; but at this time (March 22d) falling into company with some chymists, and talking of the entire abstinence from salt enjoined by that regimen ; they were of opinion, that though a strong acid was extracted from sea salt by a chymical operation, yet it was so concentrated in the salt, that the juices in the stomach and intestines could not possibly decompose it. This brought me to a resolution to eat salt, fat, greens, and every thing that was not directly acid, during the next experiment, that I might observe whether by so doing, the solvent power was weakened or destroyed.

EXPE-

EXPERIMENT IV.

I WENT on with the experiment on the three last mentioned stones. Blackrie's lixivium was taken, but (as I had now persevered for a considerable time) not in such large doses as before; taking in eight weeks, what I used to take in six.

MAY 8th, I weighed the stones, having taken them out of the gallipot a week before, and they were now as dry as when put in,

THE large pyriform one weighed thirteen grains and a quarter. The brown coloured lamina five grains and three quarters. And the small irregular

gular shaped one four grains and a half.

MR. HUNTER proposed by way of contrast, that I should try the effects of urine unsaturated with the lixivium upon pieces of the same stones, expecting that their weight would increase. Accordingly,

(EXPERIMENT V.)

MARCH 7th, I put a bit of the brown coloured stone, weighing two grains, and another bit, on which some other experiments had been made, weighing one grain and a half, into a gallipot; making a healthy person fill it with his urine, and change that once a day
as

as I did mine, and to keep it exactly in the same heat with the other gallipot.

to MARCH 27th, I found they had acquired a red brick dust colour like the furring of a chamber-pot, and had each increased half a grain in weight. I directed him to continue this experiment with care, but about the middle of April the stones were thrown into the dust-hole by mistake.

JUNE 17th, my irritations returning in a moderate degree, I had again recourse to the lixivium, and having purchased a small bottle of Adams's*, (resolving to try all of those which were in vogue) I took three tea spoonfuls in some broth at ten at night.

* Sold by Mr. Perry, Argyle Street.

THE

THE flavour of the different herbs made use of to disguise it, proved disagreeable to my palate, and gave me such an uneasiness, sickness, and nausea in my stomach, that I was obliged to take a gentle purge next morning to carry it downwards, by which I was relieved.

I WILL not affirm that my cholick was occasioned by the solvent.

I TOOK two tea spoonfuls again on the 18th at night, and the same next morning; and all that day had a confusion in my head, and little appetite: most probably occasioned by the opiate which it appears to contain. Some affirm it to be of the mildest kind, and only syrupe of diacodium. However that may be, it had so disagreeable an effect

effect on me (besides my being generally
costive when taking the lixivium, which
that would have encreased) that I deter-
mined to take no more of it, but to re-
turn to Blackrie's.

EXPERIMENT VI.

FROM June 21st to August the
7th, I repeated the third experiment
with the same stones, which weigh-
ed exactly now as on May 8th :
During which time I had taken a
half pint bottle of Blackrie's lixivium,
and kept very close to Chittick's regi-
men ; seldom or never taking liberties
with it.

ON the above named 7th of August, I took the stones out of the gallipot of urine, and gently wiping the large pyriform one with a soft cloth, upon a very slight pressure, it broke to pieces betwixt my fingers, and crumbled into small bits; excepting an interior nucleus of small dimensions which had some degree of greater firmness.

THE two other stones which had been always with it in the gallipot, seemed also to have a small degree of more cohesion, so that I put them up in a paper together.

WHEN the fragments were dry, those of the nucleus weighed twelve grains, and the other two (for they could not now be separately weighed from having

C crum-

crumbled more than I expected) seven grains.

On the whole, in fifteen weeks, the two small stones had lost nearly half of their weight; and though the large nucleus lost only about a fourth, what is of great consideration, the texture of it was so loosened (by the separation of the connecting mucus from the fabulous particles) that its parts were reduced to fragments, small enough to have passed the urethra.

Nor, as has been already mentioned, were the other two in a very dissimilar condition,

On the same 21st of June, I repeated the experiment with the person's urine mentioned before.

E X P E.

EXPERIMENT VII.

I PUT two fragments of hard stone into his gallipot, one weighing three grains and a half, and the other two grains and a half. His gallipot stood in the same heat with mine, and both were treated alike, as to emptying them once a day, and washing them out once a week with water; but the fur on both was allowed to remain on.

THE stones did not acquire the brick-dust colour as in Experiment V. nor had they increased in weight the 7th of August quite half a grain each; so that now in seven weeks they had not gained so much as before in three.

I SHALL not infer from thence, that the brick-dust coloured fur is the matter most productive of these concretions; for experience shews, that large stones formed in the bladder are seldom of that colour: (though small ones passed in the gravel commonly are; and the nucleuses of large ones most frequently *:) but it certainly evinces that the same person's urine, in a very short space of time, is liable to great variations, with respect to the colour and quantity of that fur.

As to the question, whether so strict a regimen as Chittick's is of that conse-

* 1420, *Manente semper nucleo rubro, reliqui orbes, rubri, albi, cinerei, caerulei, perque gradus colorum notatur gradus insolubilitatus, ipsa chemia detegendas.*

HERMAN. BOERHAAVE APHORISMI.

quence he supposes towards the solvent power of the medicine? I think my last experiments plainly prove that it is not. For in thirty-nine days in which I eat salt, butter, greens, &c. the three stones lost three grains and a half, and in forty-nine days of strict regimen they lost only four grains and a half. In the former period likewise, the doses of lixivium were somewhat smaller.

WHEN under the course of lixivium, I generally enjoyed my health perfectly well; and my appetite was more keen than usual. At first the strict diet, and particularly, abstaining from salt was distressing; but custom made it easy; and I supplied its place with onions, horse-radish, and mustard, which composed my sauce to all kinds of flesh meat.

COSTIVENESS was removed occasionally by swallowing with the lixivium in my broth at night, a table spoonful of white mustard seed whole; that opener was preferred, as it is also a good nervous medicine, having had a slight numbness in one of my hands before I began the lixivium.

THE taking the lixivium in milk was recommended to me, as taking off in a great degree the nauseous taste, but on trial it did not agree with my stomach and bowels.

AT first upon any slight feverishness from cold, or otherwise, I left it off, but found that afterwards unnecessary.

AN oleaginous film on the gallipot, as well as a calcareous sediment, was constantly .

stantly to be seen and even felt, as Dr. Jurin observes in his case.

My chamber-pot was scarcely furred at all in one night, but my gallipot in the course of seven weeks (from June 21st to August 7th) was slightly so; for I did not allow the servant to scour it during that time. When both that and the other person's (which had been used exactly the same time) were thoroughly dry, I carefully scraped off the crusts and weighed them: that from my gallipot, which held thirteen ounces, weighed sixteen grains: and that from the other person's, which held only nine ounces, weighed thirty-two grains; though this was at a time when his urine seemed but little impregnated with fibulous matter.

His was also of a much darker colour.

DURING the whole time of my taking the lixivium; and the intervals, from May the 13th, 1781, I never had a fit of the gravel, or passed a stone, 'till August the 18th, 1782, eleven days after I left off taking it at that time; when without any nephritick pain, I passed very easily a small one, weighing one grain; although it seemed from its corners likely to give pain. It was of an irregular square form, one side a smooth convex, and seemed part of a lamina: its texture was firm, and no way honey-combed. And December 27th, I passed a larger piece of a similar lamina with equal ease; it was of a roundish flat figure, and weighed three grains. But of this, the texture was much less firm

than

than that of the former ; for next day it broke in two in a gentleman's hands, without any force being used.

FROM the above experiments (which have been carefully made, and candidly related) it would seem I am authorised to conclude, that there is undoubtedly a solvent power in the urine of a person who is under a course of lixivium.

CHAPTER

these men of the former; for next day it
broke in two in a gentleman's hands
without any force being used.

That the above is a mistake (which
have been carefully made, and carefully
related) it would seem I am authorized
to conclude, that there is undoubtedly
a solvent power in the case of a person
who is under a course of treatment.

CHAPTER

CHAPTER II.

SOME OBSERVATIONS ON MR. N^{EWMA}N'S
SHORT ENQUIRY INTO THE MERIT
OF SOLVENTS.

I DID not read this pamphlet (tho' it was known to me) till after I had finished the account of my experiments; resolving to run no risk of being biaſſed by any authority, however respectable; but to depend entirely on the reſult of my experiments, and other facts deduced from experience.

ON the perusal of it, I found he differed so widely from me in his opinion of solvents, exploding them in all cases whatsoever, without substituting any thing in their room, where the operation of lithotomy cannot take place ; that I believed myself under a necessity of making some observations on his performance ; to prevent patients in this cruel distemper from being deprived of the relief which solvents afford.

It is true, his title only says, so far as may be necessary to compare them with the operation of lithotomy ; but if his character of them is to guide men's judgments, they will be entirely banished from practice.

It is, " that if given in small doses, and with caution, they leave the patient
pre-

precisely in the same state they found him ; if the quantity is increased, they produce feverish heats, and an uneasiness in the system, disorder in the primæ viæ, appetite, and digestion, increase the secretion of urine, and render it perhaps more turbid than it is naturally ; and if medicines of this kind are given in large quantities, and are persevered in, they ultimately tend to destroy the patient ; nor can indeed preparations of this kind be given, even in small doses, in some constitutions, without hazarding the life of the patient, and the credit of the prescriber.*”

THIS formidable list of disorders brought on by solvents, is sufficient to deter the patient most anxious for relief,

* NEWMAN on Solvents, page 24.

from using them ; but I faithfully declare, that I felt none of these bad effects myself, nor have heard from others under a course of solvents, any complaints of that kind ; which makes me suspect, that some one case, (perhaps a person of a delicate constitution) has been exaggerated into the general condition of patients under that course.

ABOVE all, the death of the celebrated Mr. Garrick is particularly insisted on, as having undoubtedly been occasioned by the use of solvents ; in testimony of which, the following state of the parts on opening his body, is given. “ The organisation and substance of the kidneys were found almost destroyed ; a stone of considerable size was found in the bladder ; the surface of which plainly evinced, that it had not been in any degree

degree abraded, dissolved, or broken down; though it might have been expected from the vast quantity of drugs he swallowed, his long perseverance, and boasted efficacy of them*."

I wish with Mr. N——n, that he could have been prevailed on to undergo the operation of lithotomy; but I cannot be of opinion that it would have secured him from the disease in his kidneys; even if he had never tasted solvents.

A MUCH esteemed friend of mine, the late Mr. John Home, Commissioner of the Sick and Hurt, had been long troubled with the gravel; and never had taken any thing as a medicine excepting honey. He died after a short illness, which was said to be the gout in his

* NEWMAN on Solvents, page 26.

stomach;

stomach; though the late Sir John Pringle was far from thinking that the disease in his kidneys was guiltless of it: and in this I imagine few people will differ from him. His body was opened by a celebrated anatomist; when both his kidneys were found much enlarged; the internal structure of them almost destroyed, and filled up with hydatides, leaving the external cortical substance extremely thinned.

A SMALL stone was also found in one of them.

SEE the great Boerhaave's description of this disease, long before the present solvents were thought of*.

AND
* 1415. *Id si in renibus sit a parte terrestri sanguinis exsiccata, sit calculus renum, maxime*

AND what foundation is there (but mere conjecture) for the assertions in the following paragraphs?

"I HAVE seen two instances where the patients in a distinct benign species of the small pox, both died, though the disease in the neighbourhood was by no means fatal: they were taking solvents when the symptoms of the small-pox came out; and though it could not be certainly said, that the solvents were the cause of their death, the natural im-

ime ortus ad ultimas arterias; specie arenae.

1416. Qui sensim ibidem accrescens renem ob-
stipat, carnem ejus suffocat, consumit, specie grumi, puris, carunculae, pellium expellit, totumque tandem corrumpit, mictus sanguineos, purulentos, foetidos excitat; quin saepe ulcerationem vicinorum, post inflammationem creat.

HERMAN. BOERHAAVE APHORISMI.

D

partial

partial inference would render it more than probable.

“ A THIRD patient under a course of solvents, was seized with a putrid fever, and ulcers in the throat, under which he sunk, though port wine, bark, blisters, &c. were liberally used, and under the direction of a gentleman who is an honour to his profession; this last patient was remarkably healthy before he was afflicted with the stone.*”

IN the foregoing narratives of putrid cases, it is evidently taken for granted, that the lixivia are strong septics, or promoters of putrefaction.

BUT Sir John Pringle in his experiments on septics and antiseptics, after

* NEWMAN on Solvents, page 27.

having

having found in experiment 3d, that the volatile alkaline salts were powerful antiseptics, says in experiment 4th,

“ I HAVE also made several experiments with the alkaline fixed salts, which have no less antiseptic powers than the volatile. The trials were made both with the lye of tartar, and salt of wormwood.”

As there might however be a different effect from the alkaline salt alone, and when joined with quick lime; I made

EXPERIMENT VIII.

OCTOBER 7th, I took four wide mouthed phials, holding four ounces

D 2

each;

each ; to every one of which I put two drahms of lean raw beef from the same piece, and two ounces of soft water.

INTO No. 1. I put no addition.

TO No. 2. thirty grains of common table salt.

TO No. 3. fifty drops of the lye of tartar.

AND to No. 4. fifty drops of Black-rie's lixivium.

THEY were corked, and set together on the side of a cast iron bath stove, in which a fire was kept all day (about nine or ten inches from it) at six o'clock in the evening.

OCTOBER

OCTOBER 8th, at bed-time, No. 2. began to turn putrid, the bit of beef being become specifically lighter than water.

9th. AT same hour, No. 1. was in a similar condition; and in the morning of the

10th, I THREW them both out, as they were become extremely offensive.

20th. No. 3. and 4. were perfectly sweet, and seemed likely to continue so for a considerable time longer, but (as it was to be expected from the proportion of lixivium to the water in No. 4. being four times more than ought, or indeed can be taken into the human stomach, with safety) the bit of beef in

that phial was dissolved into a perfect mucus.

IN other experiments made with Blackrie's solvent, fifty drops of it to the same quantity of beef and four ounces of water, turned putrid the 8th day.

And twelve drops to two ounces of water, and beef as before, in four days and a half.

THIS author has also made a long course of solvents, one of the causes which hurt lithotomy; and if well founded, would be a considerable objection to the making those two methods of cure co-operate one with another. For I have not the smallest intention of insinuating that the operation
of

of lithotomy (which is now brought to such perfection) should give place to internal remedies.

It is certainly the most expeditious method of cure, and most to be depended on. But surely the more resources we have against so painful and dangerous a distemper the better.

BESIDES in the gravel and stones in the kidneys, no operation can take place; and even in small stones in the bladder, before the symptoms become excruciating, few people can be brought to undergo it; not to mention the difficulty there often is of ascertaining their existence.

HAPPILY however Mr. N——n has said nothing to support this last men-

tioned proposition, but repetitions of bad effects from them, which I have already (as far as my experience went) denied being the case.

His words are, "As to solvents, a long course of them, from their evident effects, cannot be favourable to the operation of lythotomy, the success of which will be proportionably lessened, as the general health is impaired."

"A LANGOUR and debility, with a disposition to feverish complaints, accompanied with loss of appetite and digestion, are in greater or less degrees, consequences, which I have not in the least aggravated.*"

So far are solvents however from oc-

* NEWMAN on Solvents, page 27.

causing

caſioning a loſs of appetite and digeſtion, with the conſequences generally following thereon, languor and debility ; that in diſorders in the primæ viæ from acidi- ties, they are an excellent remedy ; and are accordingly preſcribed by ſome eminent practitioners.

AND with reſpect to feveriſh heats, I have already ſaid in my own caſe, that I was obliged to intermit taking the ſolvent for a few days at two ſeveral times, on account of ſlight feveriſh complaints, within two or three months after I began my courſe ; but whether theſe diſorders were occaſioned by the ſolvent, or from ſome other accidental cauſe, it was not in my power to judge. All the reſt of the time, my appetite, digeſtion, and health in general were perfectly good, though in an advanced age.

CHAPTER

of the loss of appetite and digestion,
with the consequent general debility
in this case in the following manner:
The patient was in the habit of
eating a great deal of food, and
was very healthy and strong, and
was very active in his business,
and was very happy in his family,
and was very successful in his
career.

After this period of health, I
have been very much distressed,
was obliged to leave the col-
lege for a few days at two or three times,
on account of slight, but frequent
attacks of indigestion, after I be-
gan my course, but which were dis-
tinctly connected with the solvent, or
from some other external cause, it was
not in my power to resist. All the rest
of the time, my appetite, digestion, and
health in general were perfectly good,
though in an advanced age.

CHAPTER

CHAPTER III.

A FEW WELL ATTESTED CASES, OF
THE BENEFICIAL EFFECTS OF SOL-
VENTS, PERFECTLY FREE FROM ANY
BAD CONSEQUENCES.

BUT as experience is our surest
guide, I shall give some cases, so
well attested, that they may be easily
enquired into. The two first are com-
municated by my worthy friend Doctor
Robert Knox, late Inspector General of
the hospitals in Canada, and Physician
to the Middlesex Hospital.

THE

THE first of which, relates to the question last treated of; whether a long course of solvents is hurtful to the operation of lithotomy. And also confirms in practice, what Sir John Pringle's experiments made morally certain before, that alkaline salts, and even solvents, are far from being promoters of putrefaction. The second case is on stones in the kidneys, where no operation can take place.

Mr. B—s had been afflicted with the stone in his bladder from his infancy; at the age of twenty-one or twenty-two, he put himself under the care of Dr. Chittick, whose lithonthriptic medicine he took with unremitting attention,

tention, and in full dose for sixty-three weeks. In the winter he was attacked with a severe inflammatory cold, for which I recommended bleeding, and found his blood highly inflamed, with a buffy coat upon it, and strong cohesión of the crassamentum. This complaint lasted ten days, during which he omitted the medicine which he had taken fifty weeks.

FROM his beginning the medicine, he could walk without making bloody water, and never had a severe fit of the stone during his continuance of it.

ON consultation with Sir John Pringle and Mr. Middleton, we agreed that as he had given a fair trial to the effect of that medicine, his only resource was submitting to the operation.

FIVE or six weeks after leaving off the medicine, he was accordingly cut, and two stones extracted by Sir Cæsar Hawkins assisted by Mr. ——. One stone weighed above an ounce, and the other above six drahms.

THE only thing remarkable was the appearance of the stones. Both of them had got a smooth surface from the use of the lixivium ; only on parts of them there seemed a fresh accretion of sandy particles ; which could be easily rubbed off. His recovery was perfectly favourable, without any accident."

C A S E II.

" Mr. G. Arbuthnot, of the Exchequer by the advice of an eminent physician

fician and myself, had taken Lane's and Blackrie's lixivium, for stones in the kidneys. Before he took the solvents he made great quantities of bloody water, but afterwards very seldom; upon motion in his carriage however it was sometimes still coffee coloured. He passed many stones during that course, and one which stuck in the urethra, at the narrowing of the skin before it passed the glans penis. Sir Cæsar Hawkins extracted it, and we found the stone very white, with a sort of clayey appearance on its surface, which you could scrape off with your nail, and which I am persuaded was occasioned by the lixivium."

Doctor Knox's Letter accompanying these Cases.

I HAVE sent you the two cases I talked to you about; and could send you

you many others of the good effects of the lixivium in giving ease and comfort to patients afflicted with this cruel distemper; and though I am not sanguine enough to suppose that any medicine yet discovered can dissolve a large stone in the bladder, yet I am persuaded the lixivium will prove effectual, where the concretions are not much too large to pass the ureters or urethra. Add to this, the inestimable benefit, in giving ease, in one of the most painful complaints that mankind is afflicted with. And more especially as I have never seen any of the putrid symptoms, or dissolved state of the blood occasioned by it, so much dreaded by Theorists.

As I was very intimate with the late Mr. Blackrie, and promoted his first publication on this subject; I have
there,

therefore chiefly used his lixivium;
which is made with salt of tartar in
place of pot ashes.

P. S. Mr. G. Arbuthnot was a very
fat man, weighing twenty-five stone,
when in health. He died apoplectic at
Richmond, but had no gravel com-
plaints for several years before his
death.

Mr. B——s is living, and by what I
hear enjoys good health.

MORTIMER STREET,

Nov. 27th, 1782.

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CASE

C A S E III.

Extract of a Letter to the Author from Mr. Hugh Stevenson, Surgeon at Egham, giving an account of his sufferings from the stone in the bladder, and the relief he obtained from the use of solvents.

“ ABOUT twelve years ago, from want of rest, and continual pain, (which was daily encreasing, in spite of the many powerful medicines taken to relieve me) my flesh was wasted, my appetite decreasing; night sweats, with swelled legs came on. I could not walk a quarter of a mile, could not ride on horseback, could not bear the motion of a coach, except on turf, or very smooth road, without severe pain and making

making bloody water. I could not lie in bed above a quarter of an hour at a time, from an irritation to make water, then did not make above half an ounce at a time, and that by drops, with very acute pain; when turning in bed, which I was obliged to do every time I awoke, the sensation from the stone rolling in the bladder, made the whole surface of the body so irritable, that, if any part of the sheet or bed cloaths touched me, it felt like cutting with an edged instrument; so that Mrs. Stevenson was always obliged to support the cloaths while turning.

Thus circumstanced, I was told of much benefit being received by taking a medicine advertised by the name of *Adams's Solvent*; having an opportunity to taste it, and discovering nothing cor-

refive or unpleasant in it ; tempted by the smallness of the quantity necessary to be taken, I determined, though without faith, to give it a few weeks trial.

I TOOK it nearly in the manner and quantity directed in the printed paper, wrapped round each bottle, viz. two tea spoonfuls night and morning in veal broth, barley water, milk and water, &c. which I encreased in a fortnight to three tea spoonfuls at night.

I HAD not taken but two of the five shilling bottles, when I thought some of my severest symptoms were not so acute ; by this encouraged to persevere, in three months I felt sensible relief, made water with less pain, and at longer distances ; in six months I could sleep sound an hour and a half at a time without

without irritation to make water; could walk a mile, and bear the motion of a carriage moving gently.

At the end of twelve months, still continuing the use of the solvent, I could bear the motion of a hackney-coach over the streets of London, with but little inconvenience; could lie in bed for two hours and a half, without irritation to make water; could turn in bed without pain, or even feeling the motion of a stone. My health was by no means hurt by the use of the medicine, but on the contrary, I eat, drank, and slept better than before; and though I by no means could call my then situation a perfect cure, yet I felt myself comparatively happier than if I had never been ill.

I FOR two years afterwards continued the medicine in smaller quantity, and am at this time, I thank God, in perfect health; and what little difficulty remains in making water, I impute to a diseased state of the neck of the bladder and adjacent parts, from the injury they had received from the stone, when so many years irritating and laying on them; as well as from frequent returns of tumid and inflamed bleeding piles.

it FROM a tendency to ~~make~~ costive^{ness} and rather heat, I have when taking the medicine, abstained from every heating cause, by meat, drink, exercise, &c. and if from cold, or any other accidental cause, fever came on, I discontinued its use, till these symptoms by proper medicines and regimen were removed.

Castor

Castor oil, soap, and rhubarb, and large glysters, &c. were occasionally used to counteract its astringency.

SINCE I have taken Adams's Solvent, nothing has come away in the form of a stone, but for the first seven months, the water was turbid when made; and immediately deposited a quantity of impalpable powder. When dry, this powder shewed no saline chrystals, nor did it dissolve in warm water, but immediately subsided. Does not the above appearance give reason to suppose that the impalpable powder was a part of the stone dissolved? As by a continuance of the muddy discharge, the pain decreased and gradually disappeared; is there not some reason to suppose the stone is dissolved, or at least rendered smooth, so as to give less pain? If only

lessened or made smooth, would it not sometimes fall upon the neck of the bladder, or obstruct the discharge of urine, which is not the case? If the stone is not dissolved, (which I flatter myself it is) it must have adhered, or is confined in a sac, and so not felt.

BUT let me not *theorise*, only return thanks to *Almighty God!* for the happiness I now enjoy, in being restored from a state of the greatest misery and distress, to a state of perfect health.

I most sincerely wish that you,

EGHAM, Sir, &c. &c."

Dec. 20th, 1782.

LIEUT. GENERAL JOHN MACKENZIE,
Commandant of the Chatham division of
Marines, has been so obliging to permit
my mentioning, that he has taken Ju-
rin's

rin's lixivium for the gravel and stones in the kidneys for many years, and with such benefit as to be induced still to continue it; without having found any bad consequences whatever resulting therefrom.

I was also favoured last October, with the particulars of the following case, which I had forgot, from the gentleman who is the subject of it; for I had opportunities of seeing him sometimes when he was under his course, and at frequent intervals ever since.

He also very kindly gave me leave (for the good of mankind) to publish his name.

SIR JOHN PRINGLE frequently mentioned this case with peculiar pleasure.

CASE

C A S E IV.

SIR JOHN MYLNE, Bart. of Chelsea, Governor of Cowes Castle, &c. had been for several years afflicted with the gravel, and had passed a great number of stones of different sizes.

IN the Spring of 1771, the symptoms of a stone in the bladder came on with great violence, which induced him to attempt a journey to town, by short stages, and in excessive pain, for advice.

HE put himself under the care of the late Sir John Pringle, and at his desire, was searched by an eminent surgeon, who found a stone, and made him hear the instrument ring upon it. Upon which, he was put on a course of Lane's

lix-

lixivium twice a day, and enjoined the strictest regimen; which he carefully complied with.

HE persisted in this course (with scarcely any intervals) for two years, when he was again searched by the same surgeon, who felt the stone, but thought it was diminished to the size of an olive, and which he might probably soon pass by the urethra.

HE went on after that near two years more, and during that long course passed several stones (which he once shewed me) some of them seemed to be parts of larger ones, and tallied with one another.

AT the end of that period he left it off entirely, and has enjoyed a good state of health ever since, (tho' by his own
acknow-

acknowledgment in his eighty-second year) free from all symptoms of the stone, excepting that he cannot hold his urine quite so long, as before he had the distemper.

Now to place the last two cases in as unfavourable a point of view for the solvents as they can possibly bear, I shall suppose that stones have always been, and still are, in these gentlemen's bladders, notwithstanding appearances to the contrary.

ON this supposition, I ask, are the lixivia, therefore, to be entirely reprobated? Have they not procured them ease and comfort for a number of years, in the last gentleman's case even to a very advanced age.

CON-

CONCLUSION.

I SHALL conclude with saying a few words, respecting myself.

I HAVE certainly received great benefit from the use of the lixivia; being able to bear a carriage on the pavement, and to walk five or six miles without the smallest uneasiness. The only inconvenience remaining (and which I must not expect to be ever entirely freed from) is, that I cannot hold my urine, (except when in bed) above two or three hours at a time, sometimes not so long.

It is now twenty months since I began the use of it; the intervals of rest are mentioned before, excepting from August the 7th to September 24th,

1782.

1782. From that time I took it to November 20th, and probably may make the present interval still longer than the last ; for I propose persevering in what has proved so salutary, for a considerable time longer, even though there should be no apparent necessity for it.

EXPERIMENTS
ON THE
COMPARATIVE STRENGTH
OF SOME OF THE
LIXIVIA NOW IN COMMON USE.

EXPERIMENT

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EXPERIMENTS

ON THE

COMPARATIVE STRENGTH

LIXIVIA now in Common Use.

SOME time in the end of May, 1781, soon after I began the course of Doctor Jurin's lixivium; I thought proper for my own satisfaction, to repeat the Doctor's experiment mentioned in his printed case; that the genuineness of the medicine might be ascertained.

F

EXPE.

EXPERIMENT I.

I PUT a small stone, weighing two grains, which I had myself passed, into a phial, with a tea spoonful of the lixivium, and two table spoonfuls of soft water; but the stone was so far from being dissolved in two days, that it was not half dissolved in a week. I then added another tea spoonful of the lixivium to the same liquor, and kept it in a phial with a glass stopper; in another week it was in a manner entirely dissolved.

ABOUT the middle of July in the same year, I got a half pint bottle of Blackrie's lixivium from Slater and Co.

Chy-

Chymists in the Poultry, with an intention to compare its solvent powers with that of Jurin's.

EXPERIMENT II.

I MADE the same experiment with a tea spoonful of Blackrie's, which I had done with the former, and it answered exactly; the stone being dissolved in two days.

THIS made me conclude that Langley's, from some cause or other, (perhaps from not excluding the air from it by a glass stopper) was not of the strength Dr. Jurin intended it.

THIS **lixivium** (I mean **Jurin's**) has the particularity of having the lime left floating in it.

DOCTOR JURIN's experiment not answering as I expected, was the reason of my leaving it off, as before mentioned.

ABOUT the middle of **January 1782**, I got a bottle of **Lane's lixivium**, and having also some of **Blackrie's**, I repeated **Dr. Jurin's** experiment with both as follows.

EXPERIMENT III.

A HARD fragment of a stone which **I procured** from **Mr. Hunter**, was dissolved

solved in Blackrie's lixivium, &c. in four days, whereas another fragment of the same stone, and of nearly the same weight, in Lane's, wanted half a grain to be dissolved in five days.

BUT as I, in my own opinion, was not sufficiently exact as to the quantity of lixivium, and water, I repeated the experiment as follows.

EXPERIMENT IV.

I took two fragments of the same stone, weighing nearly ten grains each, and put them into two different phials, with seventy drops of each lixivium (dropped from phials whose glass stoppers

pers fitted each exactly well) and one ounce of New River water.

WHEN they had stood a week over the parlour chimney piece; I weighed them. The stone in Blackrie's had lost four grains, and that in Lane's only two.

I THEN dropped thirty drops of each lixivium into their respective phials, without adding any water, and left them standing for another week. Blackrie's was then reduced to three grains and a half, and Lane's only to six grains and a quarter.

THE taste and warmth in the stomach seemed to be in the same proportion, for one tea spoonful of Blackrie's was

was as strong, and pungent, as two of the other.

I PURCHASED a small phial of Adams's solvent, which held not quite three ounces, and cost five shillings and sixpence. It is transparent, but of a dark brown colour.

EXPERIMENT V.

MAY 21st, 1782, I put a fragment of a hard stone, weighing four grains into a wide mouthed phial, and dropping seventy drops of Adams's solvent into an ounce measure, filled it up with water, and poured the mixture on the stone in the phial, which was carefully corked.

FOUR

FOUR grains exactly of the same stone had seventy drops of Blackrie's, and the same quantity of water as the other put upon it, in a similar corked phial: the two phials being set in the same heat.

MAY 26th, Blackrie's was completely dissolved; and Adams's had only lost three quarters of a grain. I let it stand 'till June 1st, when it weighed exactly two grains and a half.

I SHALL not from these experiments draw any conclusions in favour of one solvent in preference to the rest; let every one judge for himself: my aim is to be useful to the public in general, not to promote the emolument of any individual. I doubt not but all the different solvents I have mentioned have
been

been of great use to many, and have each their partisans.

IN the printed directions given with them, the quantity to be taken is properly enough adjusted to their strength. Of Blackrie's only one tea spoonful; Langley's, and Lane's, two; and Adams's three, twice a day.

THE composition of Blackrie's and Lane's is made no secret of. That of Langley's, though ushered into public notice under the name of an eminent physician, whose case speaks of the benefit he received from it forty years ago, is in some degree a secret.

BUT Mr. Perry, from the advertisement of his pamphlet recommending Adams's, (for I have not read the pam-

phlet itself) disclaims its being of the same nature with the rest, and even explodes the powers of soap-lye and quick lime, as a solvent altogether; on which I shall make no comment.

THE means used to disguise Adams's, happened to be disagreeable to me, with others it may have a different effect; and where the irritations are excessive, from the mildness of its nature, and the sedative ingredient it contains, it may possibly be preferable to any of them. Though indeed the same end may be answered with the others, by taking them in smaller doses, and adding an opiate occasionally. In the directions for the taking of Blackrie's, this is recommended.

F I N I S



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